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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/595,557	06/14/2000	Robert C. Dixon	226/132	1401

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03/22/2004

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EXAMINER

MOORE, JAMES K

ART UNIT

PAPER NUMBER

2686

23

DATE MAILED: 03/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/595,557

Applicant(s)

DIXON, ROBERT C.

Examiner

James K Moore

Art Unit

2686

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-6, 12-20, 22, 24 and 25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-6, 12-20, 22, 24 and 25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 June 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 9, 2004 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 2-6 have been considered but are moot in view of the new ground(s) of rejection.

Reissue Applications

3. The original patent, or a statement as to loss or inaccessibility of the original patent, must be received before this reissue application can be allowed. See 37 CFR 1.178.

4. In accordance with 37 CFR 1.175(b)(1), a supplemental reissue oath/declaration under 37 CFR 1.175(b)(1) must be received before this reissue application can be allowed.

Art Unit: 2686

Claims 2-6, 12-20, 22, 24, and 25 are rejected as being based upon a defective reissue declaration under 35 U.S.C. 251. See 37 CFR 1.175. The nature of the defect is set forth above.

Receipt of an appropriate supplemental oath/declaration under 37 CFR 1.175(b)(1) will overcome this rejection under 35 U.S.C. 251. An example of acceptable language to be used in the supplemental oath/declaration is as follows:

"Every error in the patent which was corrected in the present reissue application, and is not covered by a prior oath/declaration submitted in this application, arose without any deceptive intention on the part of the applicant."

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 2-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang et al. ("Comparisons of Channel-Assignment Strategies in Cellular Mobile Telephone Systems") in view of well known prior art.

Regarding claim 4, Zhang discloses a wireless communication system comprising a pattern of cellular radio communication cells and a base station dynamically assigned a first transmission frequency (a borrowed channel) for transmitting to a first cell in the pattern of cells. See sections I, II(A), and II(C). The first transmission frequency is not assigned to any base station for transmitting to any cell in the pattern of cells adjacent to the first cell (it is locked in cells within channel reuse distance). The wireless communication system also comprises a user station assigned

Art Unit: 2686

a second transmission frequency for transmitting to the base station for the first cell. It is inherent that the second transmission frequency is not assigned to any user station in any cell in the pattern of cells adjacent to the first cell because it is paired with the first transmission frequency and borrowed to form a duplex channel. Zhang does not disclose that the base and the user stations communicate using TDMA. However, the examiner takes Official Notice that it is well known in the art that TDMA allows multiple users to share a single frequency, thereby increasing capacity of a wireless system. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Zhang, such that the base and the user stations communicate using TDMA, in order to increase the capacity of the wireless communication system.

Regarding claim 2, Zhang in view of well known prior art teaches all of the limitations of claim 4, and Zhang also discloses that the first transmission frequency is from a first set comprised of a limited first predetermined number of frequencies, the second transmission frequency is from a second set comprised of a limited second predetermined number of frequencies, and the first set of frequencies is different than the second set of frequencies. See section I.

Regarding claim 3, Zhang in view of well known prior art teaches all of the limitations of claim 2, and Zhang also discloses that the first predetermined number of frequencies is three and the second predetermined number of frequencies is three. See section I.

Art Unit: 2686

Regarding claim 5, Zhang in view of well known prior art teaches all of the limitations of claim 4, and Zhang also discloses that the user station in the first cell are dynamically assigned the second transmission frequency. See sections II(A) and II(C).

Regarding claim 6, Zhang discloses a wireless communication system comprising a pattern of cellular radio communication cells and a base station dynamically assigned a first transmission frequency (a borrowed channel) for transmitting to a first cell in the pattern of cells. See sections I, II(A), and II(C). The first transmission frequency is not assigned to any base station for transmitting to any cell in the pattern of cells adjacent to the first cell (it is locked in cells within channel reuse distance). The wireless communication system also comprises a user station assigned a second transmission frequency for transmitting to the base station for the first cell. It is inherent that the second transmission frequency is not assigned to any user station in any cell in the pattern of cells adjacent to the first cell because it is paired with the first transmission frequency and borrowed to form a duplex channel. Zhang does not disclose that the base and the user stations communicate using TDMA or that the transmissions between the base station transmitting to the first cell and the user stations in the first cell are time division duplexed. However, the examiner takes Official Notice that it is well known in the art that TDMA and time division duplexing allows multiple users to share a single frequency, thereby increasing capacity of a wireless system. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Zhang, such that the base and the user stations communicate using TDMA and the transmissions between the base station transmitting to the first cell and

Art Unit: 2686

the user stations in the first cell are time division duplexed, in order to increase the capacity of the wireless communication system.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ken Moore, whose telephone number is (703) 308-6042. The examiner can normally be reached on Monday-Friday from 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold, can be reached at (703) 305-4379.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Ken Moore

3/16/04

JKM

Marsha D Banks-Harold

MARSHA D. BANKS-HAROLD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600